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**U.S. Geological Survey
Techniques of Water-Resources Investigations**

**Book 9
Handbooks for Water-Resources Investigations**

**National Field Manual
for the Collection of
Water-Quality Data**



Chapter A7.

BIOLOGICAL INDICATORS

Third Edition

Edited by D.N. Myers and F.D. Wilde



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U.S. DEPARTMENT OF THE INTERIOR
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Foreword

The mission of the Water Resources Discipline of the U.S. Geological Survey (USGS) is to provide the information and understanding needed for wise management of the Nation's water resources. Inherent in this mission is the responsibility to collect data that accurately describe the physical, chemical, and biological attributes of water systems. These data are used for environmental and resource assessments by the USGS, other government agencies and scientific organizations, and the general public. Reliable and quality-assured data are essential to the credibility and impartiality of the water-resources appraisals carried out by the USGS.

The development and use of a *National Field Manual* is necessary to achieve consistency in the scientific methods and procedures used, to document those methods and procedures, and to maintain technical expertise. USGS field personnel use this manual to ensure that the data collected are of the quality required to fulfill our mission.

(signed)

Robert M. Hirsch
Associate Director for Water

Techniques of Water-Resources Investigations

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Book 9

Handbooks for Water-Resources Investigations

Chapters of Section A, *National Field Manual for the Collection of Water-Quality Data*

A1. Preparations for Water Sampling

A2. Selection of Equipment for Water Sampling

A3. Cleaning of Equipment for Water Sampling

A4. Collection of Water Samples

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6.2 Dissolved Oxygen

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6.5 Reduction-Oxidation Potential (Electrode Method)

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A7. Biological Indicators

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A8. Bottom-Material Samples

A9. Safety in Field Activities

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